The USE of the Universal Ring-Dial.

532.d.23
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To find the Hour of the Day.

SEt the Stroke in the Sliding Piece, to the Latitude of the Place, and ſet the Stroke croſſing the little hole in the Bridg or Middle Piece, to the Day of the Month; then open the Rings, and hold them up by the Little Ring, and move the Bridg or Middle Piece, ſo towards the Sun, according as you may think to be near the Hour. and move it gently this way and that, till the Sun ſhining thorow the little hole in the Bridg, you can diſcern a little Ray or Speck of Light, to fall upon the Æquinoctial, within ſide, among the Hours; and the Point in the Middle Line, whereon the Ray or Speck falleth, is the True Hour of the Day.

To find the Altitude of the Sun.

Set the Stroke in the Sliding Piece, to the beginning of Degrees, and put a Pin thorow the Hole on the Back-ſide of the Ring, and the Shadow of the Pin ſhall ſhew the Altitude on the Large Quadrant on the Back-ſide.

To find the Suns Declination.

Set the Stroke croſſing the little hole in the Bridg, to the Day of the Month, and againſt it, on the other ſide, is the Suns Declination.

To find the Latitude of the Place.

Firſt find the Suns Meridian, or greateſt Altitude for that Day obſerved; then find the Suns Declination for that Day. If that you make your Obſervation in the Summer Half Year, *viz.* from the 10th of *March* to the 12th of *September*, then you muſt ſubtract the Declination from the Altitude; but if you obſerve in the Winter Half Year, *viz.* from the 12th of *September* to the 10th of *March*, then you muſt add the Declination to the Altitude, and either of thoſe Numbers is the Height of the Æquinoctial, which ſubtract from 90 degrees, is the Latitude of the Place.

This Inſtrument *or any other uſeful for the* Mathematicks, *are Made and Sold by* John Worgan *at his Shop under St.* Dunſtans Church *in* Fleet-ſtreet. 1691.

It ſhews y North & South better than a Comp when you have y Hour of y Day before you.